REMARKS

Upon entry of the present amendment, claims 1-8 will remain pending in the application with claims 1-5 standing allowed and claims 6-8 standing ready for further action on the merits.

The amendments made herein to the specification and claims do not incorporate new matter into the application as originally filed. In this respect, claim 6 has been amended to more particularly set forth the inventive discovery, while claim 8 has been rewritten in an independent format incorporating limitations of original claim 6.

Regarding the amendments to the specification, these amendments are made in order to clarify that original Examples 9 and 19 are not encompassed by the scope of the amended claims, and therefore have been re-labeled as Comparative Examples 27-28.

It is also noted that pages 9-10 of the specification have been amended to recite and reflect the embodiments occurring in instantly amended claims 6 and 8.

Allowable Subject Matter

Applicants appreciate the Examiner's courtesy in indicating that claims 1-5 contain allowable subject matter.

Claim Rejections Under 35 USC § 103

Claims 6-8 have been rejected under 35 USC § 103(a) as being unpatentable over EP 0 299 499. Reconsideration and withdrawal of this rejection is requested based upon the following considerations.

Claims 6 and 7 of the present application are directed to a viscous adhesive composition comprising a specifically structured hydrogenated block copolymer and an adhesion-imparting agent. The hydrogenated block copolymer for use in the viscous adhesive composition of claims 6 and 7 has the following features (bold italic portions are those currently amended):

i) vinyl bonding amount V (%) based on the conjugate diene compound of from not less than 30% to less than 70%;

ii) total hydrogenation ratio H (%) of the unsaturated double bond based on the conjugate diene compound of ***not lower than 55% and lower than 80%;***

iii) relation between V and H of: $V < H < 1.25 \times V + 10$; and

iv) hydrogenation ratio of the vinyl bond (hereinafter referred to as "B") of 82% or more.

There has not been a viscous adhesive composition comprising such a hydrogenated block copolymer in which the vinyl bond amount (V) and the hydrogenation ratio (H) are specified as above, the V

and H values are in a specific relationship, and the hydrogenation ratio of the vinyl bond is high.

The cited EP '499 reference discloses a hydrogenated block copolymer having a low hydrogenation ratio (H) (lower than 50%), but does not disclose a block copolymer having a specific hydrogenation ratio (H) and a high vinyl bond hydrogenation ratio (B) as defined by the amended claims 6 and 7.

The Examiner indicates that the specific hydrogenated block copolymers having excellent adhesive strength and creep resistance are disclosed in the working Examples 4 and 5 of the cited reference. However, the hydrogenation ratio (H) and the vinyl bond hydrogenation ration (B) are 30% and 65%, respectively, in Example 4 and 45% and 80%, respectively, in Example 5. Thus, the block copolymers of these Examples of the cited reference are distinct from that defined in the amended claims 6 and 7.

Owing to the specific structure of the hydrogenated block copolymer as described above, the viscous adhesive composition according to claims 6 and 7 has excellent adhesive power, retentivity and melt viscosity stability. The excellent physical property balance attained by the invention (Example 7 of the present application) is shown in Table A attached hereto in comparison with Comparative Examples.

For example, the viscous adhesive composition of Comparative Example 17 using a hydrogenated block copolymer having a low hydrogenation ratio (H) and a low vinyl bond hydrogenation ratio (B), corresponding to that disclosed in the cited reference, suffers from a remarkable melt viscosity change. The viscous adhesive composition of Comparative Example 19 using a hydrogenation block copolymer having a low vinyl bonding amount, corresponding to that disclosed in the cited reference, results in a low retentivity.

Claim 8 of the present application is directed to a block copolymer composition, comprising:

(1) 100 parts by weight of a hydrogenated block copolymer, and

(2) 20 to 400 parts by weight (with respect to 100 parts by weight of component (1)) of an adhesion-imparting agent,

wherein component (1) comprises:

(1-A) 20 to 90% by weight of a hydrogenated block copolymer which is a hydrogenation product of a block copolymer having one polymer block mainly comprising a vinyl aromatic hydrocarbon and one polymer block mainly comprising a conjugate diene compound, and having a vinyl bonding amount V (%) based on the conjugate diene compound of not less than 30% to less than 70%,

wherein (a) the total hydrogenation ratio H (%) of the unsaturated double bond based on the conjugate diene compound satisfies the following relational formulae:

$V < H < 2 \times V + 10$

$30 \leq H < 80$,

wherein (b) the hydrogenation ratio of the vinyl bond is 82% or more, and

wherein (c) the content of the vinyl aromatic hydrocarbon is 5 to 60% by weight; and

(1-B) 80 to 10% by weight of a hydrogenated block copolymer which is a hydrogenation product of a block copolymer having at least two polymer blocks mainly comprising a vinyl aromatic hydrocarbon and at least one polymer block mainly comprising a conjugate diene compound, and having a vinyl bonding amount V (%) based on the conjugate diene compound of from not less than 30% to less than 70%,

wherein (a) the total hydrogenation ratio H (%) of the unsaturated double bond based on the conjugate diene compound satisfies the following relational formulae:

$V < H < 2 \times V + 10$

$30 \leq H < 80$,

wherein (b) the hydrogenation ratio of the vinyl bond is 82% or more, and

wherein (c) the content of the vinyl aromatic hydrocarbon is 5 to 60% by weight,

wherein the average molecular weight of component (1-A) and component (1-B) is 50,000 to 300,000.

As can be seen from the recitation, claim 8 defines the microstructures of the copolymers in addition to the vinyl bonding amount (V), hydrogenation ratio (H) and vinyl bond hydrogenation ratio (B). More briefly, claim 8 essentially requires the presence of a hydrogenated block copolymer having a diblock structure, i.e., component (1-A). The effects given by the diblock structure in a viscous adhesive composition are shown in Table B attached hereto.

Please note that Example 9 has become outside the scope of claim 8 by the current claim amendments, and is thus now labeled as Comparative Example 27. Similarly, Example 19 is now labeled as Comparative Example 28.

Example 11 is directed to a viscous adhesive composition using hydrogenated block copolymers containing a diblock structure. On the other hand, Comparative Example 27(old Example 9) is directed to a viscous adhesive composition using hydrogenated block copolymers containing no diblock structure. (These Examples employ the same styrene content of 30%.) It can be seen that the viscous adhesive composition of Example 11 has a reduced melt viscosity and improved softening point, loop tack and retentivity, as compared to

the composition of Comparative Example 27, though the microstructures of the hydrogenated block copolymers used therein are almost the same.

The cited EP '499 reference does not provide any specific example of copolymers having a microstructure corresponding to that required in the present invention. Furthermore, the cited EP '499 reference does not provide any specific example of a copolymer having a diblock structure as required in claim 8, nor discloses or suggests superior effects on viscous adhesive characteristics given by the structure.

As explained in the foregoing, the composition of the invention using the specific hydrogenated block copolymer is not obvious from the teaching of the cited EP '499 reference.

Accordingly, based upon the above considerations, it is clear that the cited EP 0 299 499 reference is incapable of rendering obvious Applicants' invention as instantly claimed. In this respect, the reference provides no teachings or motivations, which would allow those skilled in the art to arrive at the instant invention as claimed.

CONCLUSION

Based upon the amendments and remarks presented herein, the Examiner is respectfully requested to issue a Notice of Allowance

clearly indicating that each of Applicants' pending claims are allowed and patentable under the provisions of Title 35 of the United States Code.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John W. Bailey (Reg. No. 32,881) at the telephone number below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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